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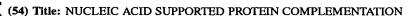
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(57) Abstract: The present invention is directed to novel methods for in vitro and in vivo detection of target nucleic acid molecules. including DNA and RNA targets, as well as nucleic acid analogues. The present invention is based on protein complementation, in which two individual polypeptides are inactive. When the two inactive polypeptide fragment are brought in close proximity during hybridization to a target nucleic acid, they re-associate into an active, detectable protein.



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International application No. INTERNATIONAL SEARCH REPORT PCT/US03/32426 CLASSIFICATION OF SUBJECT MATTER : C12Q 1/68; C07H 21/04 : 435/6; 530/300; 536/23.1, 24.3 According to International Patent Classification (IPC) or to both national classification and IPC FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S.: 435/6; 530/300; 536/23.1, 24.3 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. US 6,428,951B1 (MICHNICK et al.) 06 August 2002 (06.08.2002), see whole document. 1-24 US 2002/0064779 A1 (LANDEGREN et al.) 30 May 2002 (30.05.2002), see whole 1-24 Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: later document published after the international filing date or priority date and not in conflict with the application but cited to understand the document defining the general state of the art which is not considered to be principle or theory underlying the invention of particular relevance "X" document of particular relevance; the claimed invention cannot be earlier application or patent published on or after the international filing date considered novel or cannot be considered to involve an inventive step when the document is taken alone document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as "Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination document referring to an oral disclosure, use, exhibition or other means being obvious to a person skilled in the art document published prior to the international filing date but later than the «&» document member of the same patent family priority date claimed Date of mailing of the international search report Date of the actual completion of the international search 09 May 2004 (09.05.2004) Name and mailing address of the ISA/US Authorized officer Mail Stop PCT, Attn: ISA/US remule-tone Alexander H. Spiegler Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Telephone No. (703) 308-0196

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